

As used herein, "a method of treating a hydrocarbon containing formation" may be used interchangeably with "an in situ conversion process for hydrocarbons." "Hydrocarbons" are generally defined as molecules formed primarily by carbon and hydrogen atoms. Hydrocarbons may also include other elements, such as, but not limited to, halogens, metallic elements, nitrogen, oxygen, and/or sulfur. Hydrocarbons may be, but are not limited to, kerogen, bitumen, pyrobitumen, and oils. Hydrocarbons may be located within or adjacent to mineral matrices within the earth. Matrices may include, but are not limited to, sedimentary rock, sands, siliciclytes, carbonates, diatomites, and other porous media.

On page 64, please delete the paragraph beginning on line 11, and substitute therefor:

As shown in FIG. 3, in addition to heat sources 100, one or more production wells 104 will typically be disposed within the portion of the coal formation. Formation fluids may be produced through production well 104. Production well 104 may also include a heat source. In this manner, the formation fluids may be maintained at a selected temperature throughout production, thereby allowing more or all of the formation fluids to be produced as vapors. Therefore high temperature pumping of liquids from the production well may be reduced or substantially eliminated, which in turn decreases production costs. Providing heating at or through the production well tends to: (1) inhibit condensation and/or refluxing of production fluid when such production fluid is moving in the production well proximate to the overburden, (2) increase heat input into the formation, and/or (3) increase formation permeability at or proximate the production well.

In the Claims:

Listed below are clean copies of the amended and new claims. Marked-up copies of the amended claims are provided in an accompanying document.

1883. (amended) A method of treating a hydrocarbon containing formation in situ, comprising:
providing heat from one or more heaters to at least a portion of the formation;

allowing the heat to transfer from one or more heaters to a part of the formation;
wherein the part of the formation has been selected for heating using an atomic hydrogen to carbon ratio of at least a portion of hydrocarbons in the part of the formation, wherein at least a portion of the hydrocarbons in the part of the formation comprises an atomic hydrogen to carbon ratio greater than about 0.70, and wherein the atomic hydrogen to carbon ratio is less than about 1.65; and
producing a mixture from the formation.

1884. (amended) The method of claim 1883, wherein the one or more heaters comprise at least two heaters, and wherein controlled superposition of heat from at least two heaters pyrolyzes at least some hydrocarbons within the part of the formation.

1885. (amended) The method of claim 1883, further comprising maintaining a temperature within the part of the formation within a pyrolysis temperature range.

1886. (amended) The method of claim 1883, wherein one or more of the heaters comprise electrical heaters.

1887. (amended) The method of claim 1883, wherein one or more of the heaters comprise surface burners.

1888. (amended) The method of claim 1883, wherein one or more of the heaters comprise flameless distributed combustors.

1889. (amended) The method of claim 1883, wherein one or more of the heaters comprise natural distributed combustors.

1890. (amended) The method of claim 1883, further comprising controlling a pressure and a temperature within at least a majority of the part of the formation, wherein the pressure is controlled as a function of temperature, or the temperature is controlled as a function of pressure.

Sub E1

1891. (amended) The method of claim 1883, wherein allowing the heat to transfer from the portion of the formation to a part of the formation comprises pyrolyzing hydrocarbons within the part of the formation, and further comprising controlling the heat such that an average heating rate of the part of the formation is less than about 1 °C per day during pyrolysis.

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1892. (amended) The method of claim 1883, wherein providing heat from one or more of the heaters to at least the portion of formation comprises:

heating a selected volume (V) of the hydrocarbon containing formation from one or more of the heaters, wherein the formation has an average heat capacity (C_v), and wherein the heating pyrolyzes at least some hydrocarbons within the selected volume of the formation; and

wherein heating energy/day (P_{wr}) provided to the selected volume is equal to or less than $h*V*C_v*\rho_B$, wherein ρ_B is formation bulk density, and wherein an average heating rate (h) of the selected volume is about 10 °C/day.

Sub E1

1894. (amended) The method of claim 1883, wherein providing heat from one or more of the heaters comprises heating the part of the formation such that a thermal conductivity of at least a portion of the part of the formation is greater than about 0.5 W/(m °C).

Sub E1

1906. (amended) The method of claim 1883, wherein the produced mixture comprises a non-condensable component that does not condense at 25 °C and one atmosphere absolute pressure, wherein the non-condensable component comprises hydrogen, wherein the hydrogen is greater than about 10 % by volume of the non-condensable component, and wherein the hydrogen is less than about 80 % by volume of the non-condensable component.

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1909. (amended) The method of claim 1883, further comprising controlling a pressure within at least a majority of the part of the formation, wherein the controlled pressure is at least about 2.0 bar absolute.

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1914. (amended) The method of claim 1883, further comprising:

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providing hydrogen (H_2) to the heated part of the formation to hydrogenate hydrocarbons within the part of the formation; and

heating a portion of the part of the formation with heat from hydrogenation.

1916. (amended) The method of claim 1883, wherein allowing the heat to transfer comprises increasing a permeability of a majority of the part of the formation to greater than about 100 millidarcy.

1917. (amended) The method of claim 1883, wherein allowing the heat to transfer comprises substantially uniformly increasing a permeability of a majority of the part of the formation.

1919. (amended) The method of claim 1883, wherein producing the mixture comprises producing the mixture in a production well, and wherein at least about 7 heaters are disposed in the formation for each production well.

1920. (amended) The method of claim 1883, further comprising providing heat from three or more heaters to at least a portion of the formation, wherein three or more of the heaters are located in the formation in a unit of heaters, and wherein the unit of heaters comprises a triangular pattern.

1921. (amended) The method of claim 1883, further comprising providing heat from three or more heaters to at least a portion of the formation, wherein three or more of the heaters are located in the formation in a unit of heaters, wherein the unit of heaters comprises a triangular pattern, and wherein a plurality of the units are repeated over an area of the formation to form a repetitive pattern of units.

1922. (amended) A method of treating a hydrocarbon containing formation in situ, comprising:
providing heat from one or more heaters to a part of the formation;
allowing the heat to transfer from one or more heaters to the part of the formation to pyrolyze hydrocarbons within the part of the formation;

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wherein at least some hydrocarbons within the part of the formation have an initial atomic hydrogen to carbon ratio greater than about 0.70;

wherein the initial atomic hydrogen to carbon ration is less than about 1.65; and producing a mixture from the formation.

1923. (amended) The method of claim 1922, wherein the one or more heaters comprise at least two heaters, and wherein controlled superposition of heat from at least two heaters pyrolyzes at least some hydrocarbons within the part of the formation.

1924. (amended) The method of claim 1922, further comprising maintaining a temperature within the part of the formation within a pyrolysis temperature range.

1925. (amended) The method of claim 1922, wherein one or more of the heaters comprise electrical heaters.

1926. (amended) The method of claim 1922, wherein one or more of the heaters comprise surface burners.

1927. (amended) The method of claim 1922, wherein one or more of the heaters comprise flameless distributed combustors.

1928. (amended) The method of claim 1922, wherein one or more of the heaters comprise natural distributed combustors.

1929. (amended) The method of claim 1922, further comprising controlling a pressure and a temperature within at least a majority of the part of the formation, wherein the pressure is controlled as a function of temperature, or the temperature is controlled as a function of pressure.

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1930. (amended) The method of claim 1922, further comprising controlling the heat such that an average heating rate of the part of the formation is less than about 1 °C per day during pyrolysis.

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1931. (amended) The method of claim 1922, wherein providing heat from one or more of the heaters to at least the portion of formation comprises:

heating a selected volume (V) of the hydrocarbon containing formation from one or more of the heaters, wherein the formation has an average heat capacity (C_v), and wherein the heating pyrolyzes at least some hydrocarbons within the selected volume of the formation; and

wherein heating energy/day (P_{wr}) provided to the selected volume is equal to or less than $h * V * C_v * \rho_B$, wherein ρ_B is formation bulk density, and wherein an average heating rate (h) of the selected volume is about 10 °C/day.

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1933. (amended) The method of claim 1922, wherein providing heat from one or more of the heaters comprises heating the part of the formation such that a thermal conductivity of at least a portion of the part of the formation is greater than about 0.5 W/(m °C).

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1945. (amended) The method of claim 1922, wherein the produced mixture comprises a non-condensable component that does not condense at 25 °C and one atmosphere absolute pressure, wherein the non-condensable component comprises hydrogen, wherein the hydrogen is greater than about 10 % by volume of the non-condensable component, and wherein the hydrogen is less than about 80 % by volume of the non-condensable component.

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1948. (amended) The method of claim 1922, further comprising controlling a pressure within at least a majority of the part of the formation, wherein the controlled pressure is at least about 2.0 bar absolute.

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1953. (amended) The method of claim 1922, further comprising:
providing hydrogen (H_2) to the heated section to hydrogenate hydrocarbons within the part of the formation; and

Sub E1 heating a portion of the part of the formation with heat from hydrogenation.

Sub E1 1955. (amended) The method of claim 1922, wherein allowing the heat to transfer comprises increasing a permeability of a majority of the part of the formation to greater than about 100 millidarcy.

Sub E1 1956. (amended) The method of claim 1922, wherein allowing the heat to transfer comprises substantially uniformly increasing a permeability of a majority of the part of the formation.

Sub E1 1958. (amended) The method of claim 1922, wherein producing the mixture comprises producing the mixture in a production well, and wherein at least about 7 heaters are disposed in the formation for each production well.

1959. (amended) The method of claim 1922, further comprising providing heat from three or more heaters to at least a portion of the formation, wherein three or more of the heaters are located in the formation in a unit of heaters, and wherein the unit of heaters comprises a triangular pattern.

1960. (amended) The method of claim 1922, further comprising providing heat from three or more heaters to at least a portion of the formation, wherein three or more of the heaters are located in the formation in a unit of heaters, wherein the unit of heaters comprises a triangular pattern, and wherein a plurality of the units are repeated over an area of the formation to form a repetitive pattern of units.

Sub E1 5396. (amended) The method of claim 1919, wherein at least about 20 heaters are disposed in the formation for each production well.

5397. (amended) The method of claim 1958, wherein at least about 20 heaters are disposed in the formation for each production well.

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5398. (new) The method of claim 1883, wherein the part of the formation comprises a selected section.

5399. (new) The method of claim 1883, wherein the part of the formation comprises a pyrolysis zone.

5400. (new) The method of claim 1883, wherein the part of the formation comprises a pyrolysis zone proximate to and/or surrounding at least one of the heaters.

5401. (new) The method of claim 1883, wherein at least one of the heaters is disposed in an open wellbore.

5402. (new) The method of claim 1922, wherein the part of the formation comprises a selected section.

5403. (new) The method of claim 1922, wherein the part of the formation comprises a pyrolysis zone.

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5404. (new) The method of claim 1922, wherein the part of the formation comprises a pyrolysis zone proximate to and/or surrounding at least one of the heaters.

5405. (new) The method of claim 1922, wherein at least one of the heaters is disposed in an open wellbore.

5406. (new) A method of treating a hydrocarbon containing formation in situ, comprising:
providing heat from one or more heat sources to a part of the formation, wherein the heated part of the formation is proximate the heat sources;
allowing the heat to transfer from one or more heat sources to a pyrolysis zone to pyrolyze hydrocarbons within the pyrolysis zone;

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wherein at least some hydrocarbons within the pyrolysis zone have an initial atomic hydrogen to carbon ratio greater than about 0.70;

wherein the initial atomic hydrogen to carbon ration is less than about 1.65; and producing a mixture from the formation.

5407. (new) The method of claim 5406, wherein one or more of the heat sources comprise at least two heat sources, and wherein superposition of heat from at least two heat sources pyrolyzes at least some hydrocarbons within the pyrolysis zone.

5408. (new) The method of claim 5406, further comprising maintaining a temperature within the pyrolysis zone within a pyrolysis temperature range, wherein the pyrolysis temperature range is from about 250 °C to about 370 °C.

5409. (new) The method of claim 5406, further comprising controlling a pressure and a temperature within at least a majority of the pyrolysis zone, wherein the pressure is controlled as a function of temperature, or the temperature is controlled as a function of pressure.

C16

5410. (new) The method of claim 5406, further comprising producing a mixture from the formation, wherein the produced mixture comprises condensable hydrocarbons having an API gravity of at least about 25°.

5411. (new) The method of claim 5406, wherein the pyrolysis zone comprises a selected section.

5412. (new) The method of claim 5406, wherein at least one of the heat sources comprise natural distributed combustors.

5413. (new) The method of claim 5406, wherein at least one of the heat sources is disposed in an open wellbore.

Sgt E' > 5414. (new) The method of claim 5406, wherein allowing the heat to transfer comprises substantially uniformly increasing a permeability of a majority of the pyrolysis zone.

Ch 6 5415. (new) The method of claim 5406, wherein providing heat from one or more of the heat sources to at least the portion of formation comprises:

heating a selected volume (V) of the coal formation from one or more of the heat sources, wherein the formation has an average heat capacity (C_v), and wherein the heating pyrolyzes at least some hydrocarbons within the selected volume of the formation; and

wherein heating energy/day (Pwr) provided to the selected volume is equal to or less than $h*V*C_v*\rho_B$, wherein ρ_B is formation bulk density, and wherein an average heating rate (h) of the selected volume is about 10 °C/day.

Response To Office Action Mailed June 12, 2002

A. Pending Claims

Claims 1883-1960, 5396, 5397, and 5398-5403 are currently pending. Claims 1883-1892, 1894, 1906, 1909, 1914, 1916, 1917, 1919-1931, 1933, 1945, 1948, 1953, 1955, 1956, 1958-1960, and 5396-5397 have been amended. Claims 5398-5415 are new.

B. Examiner Interview

Applicant's undersigned attorney attended an interview with the Examiner and other personnel on August 19, 2002. In the interview all of the cited art, and certain other prior art (e.g., Ljungstrom) was discussed. In addition, the rejections set forth in the office action, and the claims were discussed. Claim amendments were also discussed. Applicant sincerely appreciates the Examiner taking the time to discuss the case.

C. Submission of Corrected Formal Drawings

The Examiner indicated in the Office Action mailed June 12, 2002, approval of the proposed drawing corrections filed on February 26, 2002. Applicant herewith submits the corrected formal drawings approved by the Examiner (nine sheets, including FIGS. 23a, 23b, 31, 32, 56, 57, 66, 67, 68, 69, 72, 73, 76, 76a, 81a, and 97).

D. The Claims Are Not Indefinite Pursuant To 35 U.S.C. § 112, Second Paragraph

Claims 1883-1960 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully disagrees with these rejections.

Claims 1919 and 1958 recite, in part “wherein producing the mixture comprises producing the mixture in a production well, and wherein at least about 7 heaters are disposed in the formation for each production well.” The Examiner states “The modified “about” is not normally used in reference to an integer count (i.e., a number of sources); thus it is unclear what the scope of the claim is.”

The fact that claim language, including terms of degree, may not be precise, does not automatically render the claim indefinite under 35 U.S.C. 112, second paragraph. Seattle Box Co., v. Industrial Crating & Packing, Inc., 731 F.2d 818, 221 U.S.P.Q. 568 (Fed. Cir. 1984).

While, as a general proposition, broadening modifiers are standard tools in claim drafting in order to avoid reliance on the doctrine of equivalents in infringement actions, when the scope of the claim is unclear a rejection under 35 U.S.C. 112, second paragraph is proper. See *In re Wiggins*, 488 F.2d 538, 541, 179 U.S.P.Q. 421, 423 (CCPA 1973).

The specification states on page 72, lines 24-27, “Providing more heat sources wells per unit area will allow faster heating of the selected portion and thus hastening the onset of

production, however more heat sources will generally cost more money to install. An appropriate ratio of heat sources to production wells may also include ratios greater than about 5:1, and ratios greater than about 7:1.” Applicant submits that the specification provides support and clarity for claims 1919 and 1958. Applicant requests removal of the rejection of claims 1919 and 1958.

The Examiner states “While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of the that term. Applicant’s vague definition of “hydrocarbon” is much broader than the accepted meaning of the term and this makes it impossible for one of ordinary skill in the art to ascertain the scope of the claims which include the term “hydrocarbon”. Applicant respectfully disagrees.

Applicant respectfully submits that Applicant has used an accepted meaning of the term “hydrocarbon” as defined by one of ordinary skill in the art. Support for this definition can be found in references within and associated with the art of the petroleum industry. For example, a reference within the art gives the following definition: “**Hydrocarbons:** molecules formed primarily by carbon and hydrogen atoms” (*Hyne, N. J. Geology for Petroleum Exploration, Drilling, and Production*, 1984, McGraw-Hill Book Company, pg. 264). The Specification (page 38, paragraph beginning on line 14) has been amended for clarification. Applicant therefore respectfully requests removal of the rejection of Applicant’s definition of the term “hydrocarbon”.

The Examiner states “Claims 1892 and 1931 call for the heating energy to be equal to or less than Pwr. Pwr is defined using an ideal equation for heating. Since this equation fails to take into account the endothermic nature of pyrolysis reactions, and heat loss to adjacent formations; it is not clear how the heating energy can be equal to or less than Pwr.” Applicant respectfully disagrees with the rejection, however Applicant agrees with the Examiner’s statement in as much as the fact that “the heating energy can be equal to or less than Pwr” takes into account “the endothermic nature of pyrolysis reactions, and heat loss to adjacent formations.” The Examiner is describing situations in which the actual heating energy would be

less than the calculated Pwr due to, as the Examiner describes, “the endothermic nature of pyrolysis reactions, and heat loss to adjacent formations.” Claims 1892 and 1931, recite in part, exactly that, “wherein heating energy/day (*Pwr*) provided to the selected volume is equal to or less than $h*V*C_v*\rho_B$.” Applicant respectfully disagrees with this rejection, however, to expedite the case Applicant has amended claims 1892 and 1931 for clarification. Applicant respectfully submits the amendments to these claims do not substantively change the scope of the claims.

The Examiner states “Claims 1906 and 1945 are unclear regarding “non-condensable component”. It is noted that the specification provides a definition for “non-condensable hydrocarbon”; however it is not clear whether this definition applies to this component.” Applicant respectfully disagrees.

The definition for non-condensable hydrocarbons is associated in the specification with non-condensable components such as, for example, H₂:

The non-condensable hydrocarbons of fluid produced from a hydrocarbon containing formation may have a H₂ content of greater than about 5 % by weight, greater than 10 % by weight, or even greater than 15 % by weight. The H₂ may be used, for example, as a fuel for a fuel cell, to hydrogenate hydrocarbon fluids in situ, and/or to hydrogenate hydrocarbon fluids ex situ. In addition, presence of H₂ within a formation fluid in a heated section of a hydrocarbon containing formation is believed to increase the quality of produced fluids. In certain embodiments, the hydrogen to carbon atomic ratio of a produced fluid may be at least approximately 1.7 or above. For example, the hydrogen to carbon atomic ratio of a produced fluid may be approximately 1.8, approximately 1.9, or greater. (Specification, page 142, lines 23-31).

Applicant submits that the specification provides support and clarity for claims 1906 and 1945. Applicant respectfully disagrees with this rejection, however, to expedite the case Applicant has amended claims 1906 and 1945 for clarification. Applicant respectfully submits the amendments to these claims do not substantively change the scope of the claims.

The Examiner states “Claims 1917 and 1956 are unclear regarding “substantially uniformly increasing a permeability”. Does this mean “increasing a permeability to a

substantially uniform value" or "increasing a permeability by a substantially uniform amount"?"
Applicant respectfully disagrees.

Support for claims 1917 and 1956 can be found at least in the specification:

Synthesis gas may be produced from a portion of a hydrocarbon containing formation containing, e.g., coal, oil shale, other kerogen containing formations, heavy hydrocarbons (tar sands, etc.) and other bitumen containing formations. The hydrocarbon containing formation may be heated prior to synthesis gas generation to produce a substantially uniform, relatively high permeability formation. In an embodiment, synthesis gas production may be commenced after production of pyrolysis fluids has been substantially exhausted or becomes uneconomical. Alternately, synthesis gas generation may be commenced before substantial exhaustion or uneconomical pyrolysis fluid production has been achieved if production of synthesis gas will be more economically favorable. Formation temperatures will usually be higher than pyrolysis temperatures during synthesis gas generation. Raising the formation temperature from pyrolysis temperatures to synthesis gas generation temperatures allows further utilization of heat applied to the formation to pyrolyze the formation. While raising a temperature of a formation from pyrolysis temperatures to synthesis gas temperatures, methane and/or H₂ may be produced from the formation.

(Specification, page 153, line 25, through page 154, line 7).

Applicant submits that the specification provides support and clarity for claims 1917 and 1956.

Applicant requests removal of the rejection of claims 1917 and 1956.

The Examiner states "Claims 1885 and 1924 are unclear regarding "a pyrolysis temperature range". This is unclear because it does not specify the range. Some unstable compounds are known to pyrolyze at relatively low temperatures. Would a temperature of 35°C be considered to be within "a pyrolysis temperature range"?" Applicant respectfully disagrees.

A pyrolysis temperature range is clearly defined in the specification, and support can be found at least in the specification, on page 46, line 9-16:

After stage 1 heating, the formation may be heated further such that a temperature within the formation reaches (at least) an initial pyrolyzation temperature (e.g., the temperature at the lower end of the temperature range shown as stage 2). A pyrolysis temperature range may vary depending on types of hydrocarbons within the formation. For example, a pyrolysis temperature range may include temperatures between about 250 °C and about 900 °C. In an alternative embodiment, a pyrolysis temperature range may include temperatures between about 270 °C to about 400 °C. Hydrocarbons within the formation may be pyrolyzed throughout stage 2.

Applicant submits that the specification provides support and clarity for claims 1885 and 1924.
Applicant requests removal of the rejection of claims 1885 and 1924.

The Examiner states “Claims 1891 and 1930 are unclear regarding “during pyrolysis”. A step of pyrolysis has not been positively claimed, thus the scope of this claim is unclear.”
Applicant respectfully disagrees.

Applicant respectfully disagrees with this rejection, however, to expedite the case
Applicant has amended claim 1891 for clarification. As regards claim 1930, a “step of pyrolysis” has been claimed in the respective independent claim 1922. Claim 1922 describes a combination of features including: “allowing the heat to transfer from the one or more heaters to the part of the formation to pyrolyze hydrocarbons within the part of the formation.” Applicant requests removal of the rejection of claims 1891 and 1930.

The Examiner states “Claims 1906 and 1945 call for the hydrogen to be between 10% and 80% of the non-condensable component by volume. The claim does not specify any other conditions such as pressure or temperature. It is noted that many such processes produce a mixture at high pressure. Although gases behave ideally near atmospheric pressure; the product gases of the claimed process deviate significantly from ideal gas law pressures. Furthermore, applicant’s definition of “condensable” uses a reference of 25°C; although chemists usually condense between 25°C and STP. Such condensation would affect the relative volumes. Without any benchmark temperature and pressure, it is impossible to ascertain the scope of the claim with precision.” Applicant respectfully disagrees with this rejection, however, to expedite

the case Applicant has amended the above-recited claims for clarification. Applicant respectfully submits the amendments to these claims do not substantively change the scope of the claims.

Applicant respectfully requests removal of the rejections of claims 1883-1960.

E. Provisional Double Patenting Rejection

The Examiner provisionally rejected claims 1883-1960 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over copending U.S. Patent Applications:

09/841,936; 09/841,937; 09/841,000; 09/841,060; 09/841,061; 09/841,127; 09/841,128; 09/841,129; 09/841,130; 09/841,131; 09/841,170; 09/841,193; 09/841,194; 09/841,195; 09/841,238; 09/841,239; 09/841,240; 09/841,283; 09/841,284; 09/841,285; 09/841,286; 09/841,287; 09/841,288; 09/841,289; 09/841,290; 09/841,291; 09/841,292; 09/841,293; 09/841,294; 09/841,295; 09/841,296; 09/841,297; 09/841,298; 09/841,299; 09/841,300; 09/841,301; 09/841,302; 09/841,303; 09/841,304; 09/841,305; 09/841,306; 09/841,307; 09/841,308; 09/841,309; 09/841,310; 09/841,311; 09/841,312; 09/841,429; 09/841,430; 09/841,431; 09/841,432; 09/841,433; 09/841,434; 09/841,435; 09/841,436; 09/841,437; 09/841,438; 09/841,439; 09/841,440; 09/841,441; 09/841,442; 09/841,443; 09/841,444; 09/841,445; 09/841,446; 09/841,447; 09/841,448; 09/841,449; 09/841,488; 09/841,489; 09/841,490; 09/841,491; 09/841,492; 09/841,493; 09/841,494; 09/841,495; 09/841,496; 09/841,497; 09/841,498; 09/841,499; 09/841,500; 09/841,501; 09/841,502; 09/841,632; 09/841,633; 09/841,634; 09/841,635; 09/841,636; 09/841,637; 09/841,638; and 09/841,639.

Applicant respectfully traverses the provisional double patenting rejection. Applicant respectfully submits that the omnibus nature of this rejection does not provide Applicant with sufficient detail in which to address such rejection. Applicant also respectfully submits that the rejection is also inconsistent with certain restrictions issued in the above-referenced cases.

Applicant respectfully requests reconsideration.

Pursuant to the discussion in the Examiner interview on August 19, 2002, for the convenience of the Examiner, Applicant will forward copies of allowed claims for the above-referenced cases to the Examiner. Applicant understands that the Examiner will review the